

ABSTRACT

The invention relates to a method for staging embryos of plants. In particular, this invention relates to a method for creating a relational database by determining transcript levels of sets of genes expressed at predetermined stages in embryo development. This approach creates a method by which embryos of unknown stage development can be determined by comparisons between expression levels of those embryos to the expression levels found in the database. This approach further allows rapid identification of transcripts in an embryo to be staged by the utilization of probes corresponding to cDNAs comprising the database. Additionally, this invention relates to a method for selecting advantageous plant clones for future propagation. Specifically, this method relates to an approach to link the biochemical condition of an embryo to current culture conditions and thus provides a method for enhancing conditions to produce embryos with a desired biochemical state.